Page 1 of 2 WEST Refine Search

# **Refine Search**

# Search Results -

Terms	Documents
L11 and (424/450).ccls.	74

US Patents Full-Text Database US OCR Full-Text Database Database:

EPO Abstracts Database

JPO Abstracts Database

**Derwent World Patents Index** 

**IBM Technical Disclosure Bulletins** 

Search:





US Pre-Grant Publication Full-Text Database



Interrupt

# **Search History**

DATE: Wednesday, January 16, 2008 **Purge Queries** Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=P	GPB, USPT, USOC, EPAB, JPAB, DWPI, TDBD; PLUR = YES; OP = OR		
<u>L12</u>	L11 and 424/450.ccls.	74	<u>L12</u>
<u>L11</u>	hydrat\$ same \$lipid same (\$mole) same (aqueous or water or buffer) same \$ml	107	<u>L11</u>
<u>L10</u>	hydrat\$ adj10 \$lipid adj10 (\$mole)	11	<u>L10</u>
<u>L9</u>	hydrat\$ adj10 \$lipid adj10 (aqueous or buffer or water) adj10 \$ml	2	<u>L9</u>
<u>L8</u>	hydrat\$ adj10 \$lipid adj10 (aqueous or buffer or water) adj10 ml	2	<u>L8</u>
<u>L7</u>	L6 and 424/450.ccls.	230	<u>L7</u>
<u>L6</u>	hydrat\$ adj10 \$lipid adj10 (aqueous or buffer or water)	491	<u>L6</u>
<u>L5</u>	L4 and 424/450.ccls.	0	<u>L5</u>
<u>L4</u>	hydrat\$ adj10 \$mole adj10 (aqueous or buffer or water)	357	<u>L4</u>
<u>L3</u>	L1 and liposome	8	<u>L3</u>
<u>L2</u>	L1 and 424/450.ccls.	0	<u>L2</u>
<u>L1</u>	hydrat\$ adj5 \$mole adj5 (aqueous or buffer or water)	198	<u>L1</u>

Page 1 of 1

Record Display Form

First Hit Fwd Refs

Previous Doc Next Doc Go to Doc#

Generate Collection / Print

L10: Entry 8 of 11

File: USPT

Aug 12, 1997

DOCUMENT-IDENTIFIER: US 5656287 A

TITLE: Liposomal cyclosporin formulations as agents for immunosuppression and multiple drug resistant indications

#### Brief Summary Text (13):

The first method described to encapsulate chemicals in liposomes involved production of multilamellar vesicles (MLVs). The MLV process involves dissolving the lipid components in a suitable solvent, evaporation of the solvent to form a dry lipid film, and hydration of the lipid film with an aqueous medium. The multilamellar vesicles which form are structures having generally more than three concentric bilayers. Lipophilic drugs are incorporated into the MLVs by codissolution of the drugs in the solvent phase, while hydrophilic drugs are entrapped between the bilayers with the hydration buffer. By increasing the length of time of hydration and gentle shaking of the resuspending lipid film, one can achieve a higher proportion of the aqueous phase per mole of lipid, and thus enhance hydrophilic drug encapsulation. The increased entrapment of aqueous buffer can also be achieved by using charged lipids.

First Hit Previous Doc Next Doc Go to Doc#

> Generate Collection Print

L10: Entry 2 of 11

File: PGPB

Jun 24, 2004

DOCUMENT-IDENTIFIER: US 20040120997 A1

TITLE: Amphoteric sterols and the use thereof

#### Detail Description Paragraph:

[0076] 50 mM liposome suspensions were prepared by hydrating a lipid film of the respective formulation (addition of 0.03 mole-% of .sup.14C-DPPC) with 2 ml of a solution of 1 mg of .sup.3H-inulin in HEPES 10 mM, NaCl 150 mM, pH 8. Following 3 freeze/thaw cycles, the suspensions were extruded several times through a 400 nm membrane (LiposoFast, Avestin). Removal of non-entrapped .sup.3H-inulin was effected by gel filtration over a G-75 Sephadex column and subsequent concentrating over CENTRIPREP (Millipore) centrifugation units. 0.5 ml of liposome suspension was administered to four test animals per formulation, and blood samples were taken after 5 min, 15 min, 60 min, 3 hours, 12 hours, 24 hours. About 50 to 100 mg of the blood samples were dissolved in 1 ml of SOLVABLE tissue dissolver (PACKARD) at 50.degree. C. for 1-3 hours and subsequently decolorized with 0.1-0.5 ml of a 30% hydrogen peroxide solution. Thereafter, 10 ml of scintillator was added, and the activity of .sup.3H and .sup.14C was measured. No direct toxic effects of the compounds could be detected.

First Hit Previous Doc Next Doc Go to Doc#

Generate Collection Print

L12: Entry 21 of 74 File: PGPB Jul 17, 2003

DOCUMENT-IDENTIFIER: US 20030133972 Al TITLE: Targeted multivalent macromolecules

<u>Current US Classification, US Primary Class/Subclass:</u> 424/450

#### Detail Description Paragraph:

[0249] BisT-PC 13 (500 mg, 546.9 .mu.mole, 95 mole %) was weighed into a clean 100 ml round bottom flask. Chelator lipid 15 (3.15 ml, 31.5 mg, 23 .mu.mole, 4 mole %), and RGD peptidomimetic lipid 12 (1.54 ml, 15.4 mg, 5.74 .mu.mole, 1 mole %) were added to the flask by glass syringe. Chloroform was removed by rotary evaporation. The lipid film was hydrated with 20 ml of 250 mM ammonium sulfate and 190 .mu.l 0.5 N NaOH while rotating the flask in the 65.degree. C. water bath. Immediately prior to extrusion, the lipid suspension was briefly sonicated in the 100 ml flask to reduce the size of the aggregates and then transferred to the extruder. The lipid suspension was extruded through a series of successively smaller pore size polycarbonate (PC) membranes. The 10 ml thermal barrel extruder maintained at 90.degree. C. was fitted with 2 stacked membranes and the lipid suspension was extruded through 100 nm membranes, then 50 nm membranes, and finally 30 nm membranes using argon at 300-600 p.s.i. The vesicles were transferred to dialysis cassettes and dialyzed against 10% sucrose (2.times.1800 ml, 4 h). The size determined by dynamic light scattering was approximately 60 nm.

## Detail Description Paragraph:

[0256] BisT-PC (1 g, 1093.7 .mu.mole, 95 mole %) and N-succinyl-DPPE (47 mg, 57.6 .mu.mole, 5 mole %), were weighed into a clean 100 ml round bottom flask and dissolved in 20 ml chloroform. Chloroform was removed by rotary evaporation. The lipid film was hydrated with 40 ml 250 mM ammonium sulfate and 500 .mu.l 0.5 N NaOH while rotating the flask in the 65.degree. C. water bath. The pH after hydration was 7.5. Vesicles were prepared with a thermal barrel extruder at 65.degree. C. by passing the solution through two stacked membranes with pore sizes of 100 nm (400 psi argon), then 50 nm membranes (400 psi argon), and finally 30 nm membranes (700 psi argon). The vesicles were transferred to dialysis cassettes and dialyzed against 10% sucrose. The size determined by dynamic light scattering was approximately 68 nm. This procedure was also used without the addition of sodium hydroxide to prepare vesicles containing 10 mole percent of the N-succinyl-DPPE lipid, 50 mole percent of dimyristoyl-sn-glycero-3-phosphocholine (DMPC), dipalmitoyl-sn-glycero-3-- phosphocholine (DPPC), or distearoyl-sn-glycero-3-phosphocholine (DSPC), and 40 mole percent cholesterol.

## Detail Description Paragraph:

[0262] The following procedure can be used to prepare vesicles containing 1-10 weight percent paclitaxel. DMPC in chloroform (42.5 mg, 62.7 umole; Avanti), N-succinyl-DPPE in 1:1 chloroform/methanol (5 mg, 6.1 umol; Avanti), and paclitaxel in chloroform (2.5 mg, 2.9 .mu.mole; Sigma) were placed in a round bottom flask. The total volume was 5 mL. The solvent was removed at 48.degree. C. by rotory evaporation. The vacuum-dried lipid was hydrated with 5 ml of 50 mM HEPES buffer pH 7.4 while mixing in a 48.degree. C. water bath. The mixture was extruded through a Lipex 10 ml thermal barrel extruder at 48.degree. C. using 50 nm polycarbonate track-etched filters (Osmonics) by applying 700 psi of pressure of argon. The

process was repeated 5 times, followed by extrusion 5 times through 50 nm filters. The size measured by dynamic light scattering was 73 nm. RGD peptidomimetic 10 was attached to the vesicles containing taxol by activation of the carboxyl group of the N-succinyl-DPPE lipid in the vesicles with EDC in the presence of the peptidomimetic. Alternatively, the vesicles may be activated with EDC, followed by the addition of the peptidomimetic, or the vesicles may be activated with EDC, followed by removal of remaining EDC by size exclusion chromatography, followed by the addition of the peptidomimetic to the activated vesicles. In a typical procedure, Vesicles (15 mg, 1 mM carboxyl group), peptidomimetic 10 (2 mM) and EDC (5 mM) are incubated in a volume of 1.5 mL at room temperature in a 1.5 mL polypropylene tube. The conjugate was dialyzed against 50 mM HEPES buffer at pH 7.4 (10K MWCO dialysis cassette) to remove unreacted peptidomimetic. The attachments were monitored by SEC analysis, and the RGD peptidomimetic-vesicle conjugates containing paclitaxel inhibit the binding of biotinylated fibrinogen, as shown in FIG. 22.

# Detail Description Paragraph:

[0266] A dried lipid film containing BisT-PC (1 g, 1093.7 .mu.mole, 95 mole %) and N-succinyl-DPPE (47 mg, 57.6 .mu.mole, 5 mole %) was prepared by rotary evaporation of a chloroform solution. The dried film was hydrated by addition of 250 mM ammonium sulfate and warming in a 65.degree. C. water bath for 30 minutes. The hydrated lipid suspension was then extruded through a series of successively smaller pore sized polycarbonate track etched filter membranes using a thermal barrel extruder maintained at 65.degree: C. Extrusion was initiated with a 100 nm pore size filter and terminated with a 30 nm pore size filter. Excess ammonium sulfate was removed by dialysis in 10% sucrose solution. The vesicles were coated with aminodextran, succinylated, and coupled to integrin antagonist 10 by the procedure described in Examples 17-19. Doxorubicin was loaded into the vesicles by mixing with a sucrose solution of doxorubicin and warming the mixture to 65.degree. C. for 5 minutes. In a typical preparation, doxorubicin at 10 mg/mL in 10% sucrose solution was added to 1 mL of vesicles containing ammonium sulfate. Complete uptake of the added doxorubicin was confirmed by SEC on a column of Sepharose CL 4B equilibrated and eluted with 10 mM HEPES, 200 mM NaCl pH 7.4.

Previous Doc Next Doc Go to Doc# **Generate Collection** Print I

L12: Entry 35 of 74

File: USPT

May 20, 2003

DOCUMENT-IDENTIFIER: US 6565889 B2

TITLE: Bilayer structure which encapsulates multiple containment units and uses thereof

#### Detailed Description Text (71):

Briefly, 50 mg of lyophilized DOPS (61.7 .mu.moles) was dissolved in 5 mL of Chloroform with 0.1 mL of B-DPPE solution [9.8.times.10.sup.-8 mole B-DPPE] to give a mole fraction of B-DPPE of 0.0016. The chloroform was evaporated under dry nitrogen and the lipid vacuum dried to remove excess solvent. The dried, mixed lipids were then hydrated (or resuspended) in 5 mL aqueous buffer solution as described above, yielding a solution with DOPS (MW 810 g/mol) concentration of 10 mg/mL (12.3 mM) and a B-DPPE (MW 1019 g/mol) concentration of 0.02 mg/mL (0.02 mM).

Current US Cross Reference Classification (9): 424/450

> Go to Doc# Previous Doc Next Doc

Previous Doc Go to Doc# Next Doc

Generate Collection Print

L12: Entry 45 of 74

File: USPT

Sep 19, 2000

DOCUMENT-IDENTIFIER: US 6120800 A

TITLE: Vinca-alkaloid vesicles with enhanced efficacy and tumor targeting properties

### Detailed Description Text (13):

This example details the entrapment of vincristine into neutral vesicles, e.g., distearoylphosphatidylcholine:cholesterol, 2:1 molar ratio. This example further details the efficacy of neutral liposomes. Vesicles were prepared by hydrating approximately 500 mg of sprayed-dried lipids, DSPC: CHOL (2.1, mole ratio), at 65.degree. C. with either a buffer containing the ammonium salt of one of the counterions or 300 mM sucrose. The lipid concentration was approximately 100 mg/ml. The hydrating buffers consisted of (1) 150 mM ammonium glutamate; (2) 100 mM ammonium tartrate; (3) 150 mM ammonium dihydrogen pyrophosphate; (4) 150 mM ammonium aspartate; (5) 100 mM ammonium ethylenediaminetetraacetic acid; (6) 100 mM ammonium succinate; (7) 100 mM monium pyrophosphate; (8) 150 mM concentration ammonium lactobionate; (9) 75 mM ammonium citrate; and (10) ammonium sulfate. The hydrated lipids were sonicated at 65.degree. C. for about 20 minutes with a probe sonicator. The vesicles were annealed for 10 minutes at 65.degree. C., cooled to room temperature (RT), centrifuged 10 minutes at 3500 RPM, and subjected to a buffer exchange by gel filtration on a 60 cm G50-80 Sephadex column previously equilibrated with unbuffered 300 mM sucrose. Concentration of the lipids was determined by HPLC. The liposomes were then stored at room temperature overnight.

Current US Original Classification (1): 424/450

Previous Doc Next Doc Go to Doc#

Generate Collection Print

L1: Entry 10 of 13

File: USPT

Jan 26, 1988

DOCUMENT-IDENTIFIER: US 4721612 A

TITLE: Steroidal liposomes

#### Detailed Description Text (79):

Multilamellar liposomes made of egg phosphatidylcholine (EPC) (Avanti Polar Lipids, Birmingham, AL) were spin labelled and compared to similarly labeled tris-salt CHS-MLVs prepared essentially as described previously. In the case of EPC MLVs, 1 mole percent of either 5, 7, 9, 10, 12 or 16 doxylstearate (Molecular Probes, Junction City, OR) was added to 40 mg lipid in chloroform and the resulting solution dried to a thin film by rotary evaporation. Then 2 ml of Tris-HCl buffer was used to hydrate this film by vortexing until the film was completely suspended. The resulting EPC-MLVs were washed twice prior to spectroscopy.

Previous Doc

Next Doc

Go to Doc#

WEST Refine Search Page 1 of 1

# **Refine Search**

Your wildcard search against 10000 terms has yielded the results below.

# Your result set for the last L# is incomplete.

The probable cause is use of unlimited truncation. Revise your search strategy to use limited truncation.

Search Results -

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hydrat\$	same (epc	or lecithin	same \$mo	le same	(aqueous o	r buffer o	wate	r) sam	e \$ml		13
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				Search	History					•	
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END OF SEARCH HISTORY

# **Hit List**

First Hit

Your wildcard search against 10000 terms has yielded the results below.

# Your result set for the last L# is incomplete.

The probable cause is use of unlimited truncation. Revise your search strategy to use limited truncation.

Clear Generate Collection Print Fwd Refs **Bkwd Refs Generate OACS** 

**Search Results -** Record(s) 1 through 13 of 13 returned.

☐ 1. Document ID: US 6352716 B1

L1: Entry 1 of 13

File: USPT

Mar 5, 2002

US-PAT-NO: 6352716

DOCUMENT-IDENTIFIER: US 6352716 B1

TITLE: Steroidal liposomes

DATE-ISSUED: March 5, 2002

INVENTOR-INFORMATION:

STATE ZIP CODE COUNTRY NAME CITY PA Janoff; Andrew S. Yardley Popescu; Mircea C. Plainsboro NJ NJ Weiner; Alan L. Lawrenceville Bolcsak; Lois E. . Lawrenceville NJ Tremblay; Paul A. Hamilton N.T Swenson: Christine E. Princeton Junction NJ

US-CL-CURRENT: 424/450; 264/4.1, 264/4.6, 424/1.21, 424/9.1, 436/829, 514/182, <u>514/78</u>, <u>514/887</u>, <u>514/967</u>

Full Title Citation Front Review Classification Date Reference Claims KWC Draw De September 1988 ☐ 2. Document ID: US 6149937 A

L1: Entry 2 of 13

File: USPT

Nov 21, 2000

US-PAT-NO: 6149937

DOCUMENT-IDENTIFIER: US 6149937 A

TITLE: Liposome encapsulated amphiphilic drug compositions

DATE-ISSUED: November 21, 2000

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY Camu; Frederic Nieuwerkerken BE
Alafandy; Mokarram Brussels BE
Brasseur; Robert Haillot BE
Legros; Franz Jumet BE
Bouffioux; Oliver Lesves BE

US-CL-CURRENT:  $\frac{424}{450}$ ;  $\frac{264}{4.1}$ ,  $\frac{264}{4.3}$ ,  $\frac{424}{1.21}$ ,  $\frac{424}{417}$ ,  $\frac{424}{9.321}$ ,  $\frac{424}{9.51}$ ,

424/94.3

Full Title Citation Front Review Classification Date Reference **Sequences Attachments** Claims KWIC Draw. De

☐ 3. Document ID: US 6083530 A

L1: Entry 3 of 13

File: USPT

Jul 4, 2000

US-PAT-NO: 6083530

DOCUMENT-IDENTIFIER: US 6083530 A

TITLE: High drug: lipid formulations of liposomal-antineoplastic agents

DATE-ISSUED: July 4, 2000

INVENTOR - INFORMATION:

STATE ZIP CODE COUNTRY NAME CITY CA Mayer; Lawrence D. Vancouver CA Bally; Marcel B. Vancouver CA Cullis; Pieter R. Vancouver NJ Ginsberg; Richard S. Jamesburg Washington NJ Mitilenes; George N.

US-CL-CURRENT: 424/450; 264/4.1, 264/4.3, 428/402.2, 436/826, 436/829, 514/908

Full Title Citation Front Review Classification Date Reference Sequences Attachmants Claims KWIC Draw. De

☐ 4. Document ID: US 5795589 A

L1: Entry 4 of 13

File: USPT

Aug 18, 1998

US-PAT-NO: 5795589

DOCUMENT-IDENTIFIER: US 5795589 A

\*\* See image for Certificate of Correction \*\*

TITLE: Liposomal antineoplastic agent compositions

DATE-ISSUED: August 18, 1998

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Mayer; Lawrence D. Vancouver CA

Bally; Marcel B.

Vancouver

CA

Cullis; Pieter R.

Vancouver

CA

Ginsberg; Richard S.

Jamesburg

NJ

Mitilenes; George N.

Washington

NJ

US-CL-CURRENT:  $\underline{424}/\underline{450}$ ;  $\underline{264}/\underline{4.1}$ ,  $\underline{264}/\underline{4.3}$ ,  $\underline{428}/\underline{402.2}$ ,  $\underline{436}/\underline{826}$ ,  $\underline{436}/\underline{829}$ ,  $\underline{514}/\underline{908}$ 

Full Title Citation Front Review	Classification Date Reference	Manual Site of	Claims KMC [	rawu De
	•			

5. Document ID: US 5744158 A

L1: Entry 5 of 13

File: USPT

Apr 28, 1998

US-PAT-NO: 5744158

DOCUMENT-IDENTIFIER: US 5744158 A

\*\* See image for Certificate of Correction \*\*

TITLE: Methods of treatment using high drug-lipid formulations of liposomalantineoplastic agents

DATE-ISSUED: April 28, 1998

INVENTOR-INFORMATION:

COUNTRY STATE ZIP CODE NAME CITY

Mayer; Lawrence D.

Vancouver Vancouver CA

Bally; Marcel B. Cullis; Pieter R.

Vancouver

CA CA:

Ginsberg; Richard S.

Jamesburg

NJ

Mitilenes; George N.

Washington

NJ

US-CL-CURRENT: <u>424</u>/<u>450</u>

Full Title Citation Front Review	Classification Date	Reference	0.566	Claims KV	MC Drawe De
☐ 6. Document ID: US 56	516341 A				
Ll: Entry 6 of 13		File: USPT		Apr 1	, 1997

US-PAT-NO: 5616341

DOCUMENT-IDENTIFIER: US 5616341 A

TITLE: High drug: lipid formulations of liposomal antineoplastic agents

DATE-ISSUED: April 1, 1997

INVENTOR-INFORMATION:

CITY STATE ZIP CODE COUNTRY NAME

CA Vancouver Mayer; Lawrence D. CA Bally; Marcel B. Vancouver

Cullis; Pieter R.

Vancouver

CA

Ginsberg; Richard S.

Jamesburg

NJ

Mitilenes; George N.

Washington

NJ

US-CL-CURRENT: 424/450; 264/4.3, 424/1.21, 436/164, 436/829, 514/908

Full Title Citation	Front Review	Classification	Date	Reference	Enginent;	Lifty Characters	Claims	KWC	Draw, De
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7. Document ID: US 5288499 A

L1: Entry 7 of 13

File: USPT

Feb 22, 1994

US-PAT-NO: 5288499

DOCUMENT-IDENTIFIER: US 5288499 A

TITLE: Sterodial liposomes

DATE-ISSUED: February 22, 1994

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Janoff; Andrew S. Yardley PA
Popescu; Mircea C. Plainsboro NJ
Weiner; Alan L. Lawrenceville NJ
Bolcsak; Lois E. Lawrenceville NJ
Tremblay; Paul A. Hamilton NJ

Swenson; Christine E. Princeton Junction NJ

US-CL-CURRENT:  $\underline{424/450}$ ;  $\underline{264/4.1}$ ,  $\underline{264/4.6}$ ,  $\underline{424/1.21}$ ,  $\underline{424/9.4}$ ,  $\underline{428/402.2}$ ,  $\underline{436/829}$ ,  $\underline{514/167}$ ,  $\underline{514/78}$ ,  $\underline{514/887}$ ,  $\underline{514/967}$ 

Full Title Citation	n Front Review	Classification	Date	Reference	THE STATES	CEEF 2	Claims	KMC	Drawi De
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☐ 8. Document ID: US 5231112 A

L1: Entry 8 of 13

File: USPT

Jul 27, 1993

US-PAT-NO: 5231112

DOCUMENT-IDENTIFIER: US 5231112 A

TITLE: Compositions containing tris salt of cholesterol hemisuccinate and

antifungal

DATE-ISSUED: July 27, 1993

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Janoff; Andrew S. Yardley PA
Popescu; Mircea C. Plainsboro NJ

Page 5 of 7

Weiner; Alan L.

Lawrenceville

NJ

Bolcsak; Lois E.

Lawrenceville

Hamilton

NJ

Tremblay; Paul A. Swenson; Christine E.

Princeton Junction

NJ NJ

US-CL-CURRENT: 514/401; 424/DIG.15, 514/887, 514/967

Full	Title	Citation	Front	Review	Classification	Date	Reference	NAT THE REAL PROPERTY.	Claims	KWIC	Drawu De
				-							

☐ 9. Document ID: US 4891208 A

L1: Entry 9 of 13

File: USPT

Jan 2, 1990

US-PAT-NO: `4891208

DOCUMENT-IDENTIFIER: US 4891208 A

TITLE: Steroidal liposomes

DATE-ISSUED: January 2, 1990

INVENTOR-INFORMATION:

NAME

CITY

STATE ZIP CODE

COUNTRY

Janoff; Andrew S.

Yardley

PA

Popescu; Mircea C.

Plainsboro

NJ

Weiner; Alan L. Bolscak; Lois E. Plainsboro Lawrenceville NJ

Tremblay; Paul A.

Hamilton

NJ NJ

Swenson; Christine E.

Plainsboro

NJ.

US-CL-CURRENT: <u>424/1.21</u>; <u>264/4.1</u>, <u>264/4.6</u>, <u>424/450</u>, <u>424/9.4</u>, <u>424/9.6</u>, <u>428/402.2</u>, <u>436/829</u>, <u>514/167</u>, <u>514/3</u>, <u>514/396</u>, <u>514/78</u>, <u>514/885</u>, <u>514/887</u>, <u>514/967</u>, <u>604/891.1</u>


Full Title Citation Front Review Classification Date Reference

Claims

Draw D

☐ 10. Document ID: US 4721612 A

L1: Entry 10 of 13

File: USPT

Jan 26, 1988

US-PAT-NO: 4721612

DOCUMENT-IDENTIFIER: US 4721612 A

TITLE: Steroidal liposomes

DATE-ISSUED: January 26, 1988

INVENTOR-INFORMATION:

NAME

CITY

STATE ZIP CODE

COUNTRY

Janoff; Andrew S.

Yardley

PA

Popescu; Mircea C.

Plainsboro

NJ

Weiner; Alan L.

Plainsboro

ŊJ

Bolcsak; Lois E.

Lawrenceville

NJ

Tremblay; Paul S.

Hamilton

NJ

US-CL-CURRENT: 424/1.21; 264/4.1, 264/4.6, 424/450, 424/9.4, 424/9.6, 428/402.2, 436/52, 436/829, 514/167, 514/78, 514/887, 514/967

Full Title Citation Front Review Classification Date Reference இது இது இருக்கு பெற்ற இடு Claims KMC Draw. De

☐ 11. Document ID: US 3796709 A

L1: Entry 11 of 13

File: USOC

Mar 12, 1974

US-PAT-NO: 3796709

DOCUMENT-IDENTIFIER: US 3796709 A

TITLE: (ALPHA-CYANAMINO) ACETAMIDOCEPHALOSPORINS

DATE-ISSUED: March 12, 1974

INVENTOR-NAME: DOLFINI J; BREUER H ; ERICKSON R ; PARKER W

US-CL-CURRENT: 540/230, 540/228

Full Title Citation Front Review Classification Date Reference

☐ 12. Document ID: US 3600422 A

L1: Entry 12 of 13

File: USOC

Aug 17, 1971

US-PAT-NO: 3600422

DOCUMENT-IDENTIFIER: US 3600422 A

TITLE: CARBONATE-GROUP-CONTAINING OXALIC ACID ANHYDRIDE

DATE-ISSUED: August 17, 1971

INVENTOR-NAME: KRUEGER ROBERT K; WEINSTEIN SAUL S

US-CL-CURRENT: <u>558/267</u>

Full Title Citation Front Review Classification Date Reference

☐ 13. Document ID: US 2982774 A

L1: Entry 13 of 13

File: USOC

May 2, 1961

US-PAT-NO: 2982774

DOCUMENT-IDENTIFIER: US 2982774 A

Record List Display Page 7 of 7

TITLE: 21-aldehydes of 9alpha-fluoro-steroids and derivatives thereof

DATE-ISSUED: May 2, 1961

INVENTOR-NAME: MAX TISHLER

US-CL-CURRENT: <u>552/575</u>; <u>552/577</u>

Full Title Citation Front Review Classification	Date Reference Applications Claims KWIC D
Clear Generate Collection Print	Fwd Refs   Bkwd Refs   Generate OAC
Terms	Documents

Display Format: - Change Format

<u>Previous Page</u> <u>Next Page</u> <u>Go to Doc#</u>

Previous Doc Next Doc Go to Doc#

Generate Collection | Print

L2: Entry 14 of 16

File: USPT

Nov 25, 1980

DOCUMENT-IDENTIFIER: US 4235871 A

TITLE: Method of encapsulating biologically active materials in lipid vesicles

#### Brief Summary Text (31):

Representative of materials and compounds that may be encapsulated by the method of the invention include but are not limited to drugs such as cytosine arabinoside, and its phosphorylated derivatives; chemicals such as cyclic 3', 5' adenosine monophosphate, sucrose, antibiotics such as penicillin and streptomycin, polypeptide hormones such as insulin, oxytocin, and vasopressin, macromolecules such as dextran, proteins such as albumin, ferritin, and immunoglobulin G; enzymes such as alkaline phosphatase; nucleic acids such as polyadenylic acid (poly A), ribonucleic acids, deoxyribonucleic acids, virus and bacteria such as C. parvum and like materials.

#### Detailed Description Text (4):

To the gel obtained above there is added 1.5 ml. of the sodium chloride/histidine/TES buffer described above and the flask is rotated gently to obtain an aqueous suspension of the gel. The resulting mixture is evaporated at 30.degree. C. under a pressure of circa 10-50 mm Hg for an additional 15 minutes to obtain an opaque suspension of phospholipid vesicles (synthetic liposomes) having mean diameters of 0.2 to 0.6 microns. Prolonged evaporation without addition of extra buffer will result in similar suspensions. Examination under an electron microscope shows the vesicles to be substantially oligolamellar vesicles.

### Detailed Description Text (22):

As mentioned above, the ionic strength of the aqueous mixture for encapsulation is a determining factor for the degree of encapsulation obtained in the method of the invention. As the ionic strength of the aqueous mixture for encapsulation increases, there is a decrease in both the percentage of encapsulation and in the volume of encapsulated aqueous space per .mu. mole of phospholipid. High concentrations of sucrose glycerol, urea and the like do not have the same effect as increasing the concentration of ionic species in the mixture for encapsulation. This effect is shown in the following Example 5.

## Detailed Description Text (36):

The round bottom flask described in Example 1, supra. is charged with 50 .mu.moles PG:PC (1:4) and 50 moles cholesterol dissolved in chloroform. With rotary evaporation, the solvent is evaporated leaving a film of the lipid mixture on the inner walls of the flask. The flask is then purged with nitrogen gas and 5 ml of diethylether is added with stirring to redissolve the lipids. To the solution is added 1.5 ml of an aqueous suspension of the heat-killed bacterium C. parvum in Dulbecco's phosphate buffered saline\*. The resulting mixture is emulsified by sonification for 5 minutes at 0.degree. C. in a sonicator, (Laboratory supplies, supra.). The emulsion is then evaporated at a temperature of 20.degree. C. and under a reduced pressure of 10-50 mm Hg on a flash evaporator until a gel is formed. To the gel is added 1.5 ml of Dulbecco's phosphate buffered saline and the evaporation is continued for an additional 15 minutes. The encapsulated C. parvum is separated from unencapsulated C. parvum by centrifugation on a sucrose gradient. Thirty percent of the presented C. parvum is encapsulated. The vesicles so obtained may be used as an adjuvant for immunotherapy against certain cancers as detailed in

Seminars Oncol. 1:367-378, 1974.

Previous Doc

Next Doc

Go to Doc#

Record Display Form Page 1 of 1

First Hit Fwd Refs

Previous Doc Next Doc Go to Doc#

Generate Collection Print

L2: Entry 12 of 16

File: USPT

Oct 17, 2006

DOCUMENT-IDENTIFIER: US 7122668 B2

\*\* See image for Certificate of Correction \*\*

TITLE: Platinum complexes and their use in therapy

PRIOR-PUBLICATION:

DOC-ID

DATE

US 20050090478 A1

April 28, 2005

#### Description Paragraph (162):

Trans-[PtCl.sub.2(NH.sub.3)(piperidino-piperidine)].HCl (10 mg/ml) was dissolved in 0.9% NaCl at 65.degree. C. and left at this temperature for 1 hr. Lipids (HSPC:cholesterol:PEG.sup.2000-DSPE 51:44:5) were dissolved in ethanol. The lipids were hydrated by adding this ethanolic solution to the drug mixture. Final lipid concentration was 150 mg/ml (15%) in 25% ethanol, at 65.degree. C. The mixture was kept stirring for 1 hr at 65.degree. C., then extruded at 65.degree. C., 5 times through 25 mm polycarbonate filters with 200 nm pore size using Lipex extruder (Nothern Lipids Inc, Vancouver, Canada), followed by extrusion 11 times trough a 100 nm pore size polycarbonate filter. Sized liposomes (.about.100 nm) were allowed to cool to room temperature. During the cooling, a heavy precipitate formed the supernatant was collected. Then supernatant was cooled to 4.degree. C. overnight and the supernatant was collected again. The supernatant was collected and dialyzed against 10 mM histidine buffer (pH=6.5) containing 10% sucrose and 1 mM NaCl for overall of 5 times against 100 vols. of buffer and 1 time against 200 vols at 4.degree. C. Under these conditions, a complete equilibration with buffer should occur. The final liposome dispersion was a translucent white.

First Hit	Previous Doc	Next Doc	Go to Doc#	
		Generate	Collection	Print

L2: Entry 10 of 16

File: PGPB

Oct 17, 2002

DOCUMENT-IDENTIFIER: US 20020151508 A1 TITLE: Methods for treating proliferative diseases

### Summary of Invention Paragraph:

[0015] histidine, hydrochloric acid and/or sodium hydroxide, ammonium sulfate, and sucrose; wherein the weight percentage ratio of a:b:c:d is about 1.0 :1.60: 4.80: 1.60 mg/mL respectively.

#### Detail Description Paragraph:

[0033] Doxil.RTM. is provided as a sterile, translucent, red liposomal dispersion in 10-mL or 30-mL glass, single use vials. Each vial of Doxil.RTM. contains doxorubicin HCl and the STEALTH.TM. & liposome carriers. Each vial contains 20 mg or 50 mg doxorubicin HCl at a concentration of 2 mg/mL and a pH of 6.5. The STEALTH.RTM. liposome carriers are composed of N-(carbonyl-methoxypolyethylene glycol 2000)-1,2-distearoyl-sn-glycero-3-phosphoethanolamine sodium salt (MPEG-DSPE), 3.19 mg/mL; fully hydrogenated soy phosphatidylcholine (HSPC), 9.58 mg/mL; and cholesterol, 3.19 mg/mL. Each mL also contains ammonium sulfate, approximately 2 mg; histidine as a buffer; hydrochloric acid and/or sodium hydroxide for pH control; and sucrose to maintain isotonicity. The compounds doxorubicin HCL, (MPEG-DSPE), (HSPC), and cholesterol are present in a weight percentage ratio of about 1.0 :1.60 :4.80 :1.60 mg/ml respectively. Greater than 90% of the drug is encapsulated in the STEALTH.RTM. liposomes.

## CLAIMS:

- 4. The method of claim 2, wherein the liposomal anthracycline composition is pegylated liposomal doxorubicin comprising: a) doxorubicin HCl; b) N-(carbonyl-methoxypolyethylene glycol 2000)-1,2-distearoyl-sn-glycero-3-- phosphoethanolamine sodium salt; c) fully hydrogenated soy phosphatidylcholine; d) cholesterol; histidine, hydrochloric acid and/or sodium hydroxide, ammonium sulfate, and sucrose; wherein the weight percentage ratio of a:b:c:d is about 1.0 :1.60 : 4.80: 1.60 mg/mL respectively.
- 5. The method of claim 3 wherein the liposomal anthracycline composition is pegylated liposomal doxorubicin comprising: a) doxorubicin HCl; b) N-(carbonyl-methoxypolyethylene glycol 2000)-1,2-distearcyl-sn-glycero-3-- phosphoethanolamine sodium salt; c) fully hydrogenated soy phosphatidylcholine; d) cholesterol; histidine, hydrochloric acid and/or sodium hydroxide, ammonium sulfate, and sucrose; wherein the weight percentage ratio of a:b:c:d is about 1.0:1.60: 4.80: 1.60 mg/mL respectively.

# **Refine Search**

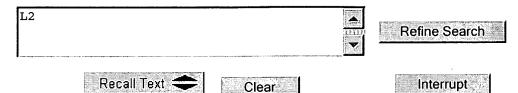
# Search Results -

Terms	Documents
L1 and sucrose	16

Database:

US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search:



# **Search History**

DATE: Wednesday, January 16, 2008

**Purge Queries** 

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Create Case

Set Name side by sideQuery sideHit Count result setSet Name result setDB=PGPB, USPT, USOC, EPAB, JPAB, DWPI, TDBD; PLUR=YES; OP=ORL2L1 and sucrose16L2L1liposomes same (histidine adj3 buffer)21L1

**END OF SEARCH HISTORY** 

Previous Doc Next Doc Go to Doc#

Generate Collection | Print |

L3: Entry 65 of 74

File: USPT

Mar 9, 1993

DOCUMENT-IDENTIFIER: US 5192528 A

TITLE: Corticosteroid inhalation treatment method

#### Detailed Description Text (8):

Another preferred procedure is based on hydration of a lipid film, to form multilamellar vesicles (MLVs). In this procedure, a mixture of liposome-forming lipids of the type detailed above, including the selected corticosteroid drug, are dissolved in a suitable solvent, and the lipid solution is evaporated in a vessel to form a thin film, which is then covered by an aqueous medium. With addition of a suitable aqueous medium, such as the above phosphate buffered saline medium, the lipid film hydrates to form MLVs, typically with sizes between about 0.1 to 10 microns. As above, aqueous medium is preferably added to a final lipid concentration of between about 10-100 .mu.mole/ml, and preferably about 40 .mu.mole/ml.

<u>Current US Cross Reference Classification</u> (1): 424/450

Previous Doc

Next Doc

Go to Doc#

First Hit Previous Doc Next Doc Go to Doc#

Generate Collection | Print

L2: Entry 12 of 25

File: PGPB

May 2, 2002

DOCUMENT-IDENTIFIER: US 20020051812 A1

TITLE: Drug delivery via therapeutic hydrogels

#### Detail Description Paragraph:

[0052] Liposomes were composed of DPPC/Cholesterol/PEG-DSPE/Rhodamine-DPPE in a 1:1:0.05:0.001 ratio. The formulation to be used is not limiting, and any number of lipid-to-other-constituents ratios may be used to effectively achieve the embodiments of this invention. The lipids were dissolved in 4 mL of chloroform and the solvent was removed in vacuo. The resulting lipid film was placed under vacuum for two hours and subsequently hydrated with 1 mL of 250 mM ammonium sulfate (pH 2.5) at 45.degree. C. Liposomes were then frozen in liquid nitrogen and thawed in a 45.degree. C. water bath (5X), followed by high-pressure extrusion through two 100 nm-pore membranes (10X). This procedure has been shown to produce unilamellar liposomes with an average diameter of 100 nm and an equal solute distribution between the exterior and interior of the liposomal membrane. M. J. Hope, M. B. Bally, G. Webb, and P. R. Cullis, "Production of large unilamellar vesicles by a rapid extrusion procedure. Characterization of size distribution, trapped volume and ability to maintain a membrane potential," Biochim. Biophys. Acta, 812:55-65 (1985); L. D. Mayer, M. J. Hope, P. R. Cullis, and A. S. Janoff, "Solute distributions and trapping efficiencies observed in freeze-thawed multilamellar vesicles," Biochim. Biophys. Acta, 817:193-196 (1986). External ammonium sulfate was removed by passing the suspension through a G-50 column (1.times.10 cm) and eluting with a 10% sucrose solution (pH 4.0).

Page 1 of 1

Record Display Form

First Hit Fwd Refs Previous Doc Next Doc Go to Doc#

Generate Collection | Print |

L2: Entry 20 of 25

File: USPT

Aug 29, 2000

DOCUMENT-IDENTIFIER: US 6110491 A

TITLE: Compound-loaded liposomes and methods for their preparation

#### Detailed Description Text (92):

Aqueous solutions containing ammonium salts of hydrochloric, nitric, methanesulfonic, L(+)-tartaric, citric, sulfuric, phosphoric, diethylenetriamine pentaacetic (DTPA), or polyacrylic (Mol. weight. 2,000) acids were prepared by titration of the respective acids in water with the standard aqueous solution of ammonium hydroxide to achieve pH 7.3.+-.0.05, followed by volume adjustment to achieve 0.2 equivalent/L of ammonium ion, and, if necessary, by addition of dry sucrose to achieve osmolarity of 377 mmol/kg. (These solutions are hereinafter referred to as Inner Buffers). All solutions additionally contained 10 mM hydroxyethylpiperazinoethane sulfonic acid (HEPES) to stabilize the pH at titration endpoint. To afford determination of intraliposomal pH, a fluorescence indicator 8hydroxypyrene trisulfonate was added to the solutions to the final concentration of 0.2 mM. Liposomes containing entrapped ammonium salt solutions as above were prepared from egg phosphatidyl choline, cholesterol, and PEG-DSPE as described in the Example 7, except that lipid hydration and extrusion were carried out at room temperature. The bulk aqueous phases of liposome preparations were exchanged by gel-filtration for an aqueous solution (Outer buffer) containing 0.2 M ammonium chloride, 10 mM HEPES, pH 7.3, osmolarity 377 mmol/kg, to obtain liposome preparations substantially without transmembrane ammonium-ion gradients. Loading of doxorubicin was performed as in Example 7, except that it was at 36.degree. C. for 12 hours. Intraliposomal pH was determined using HPTS fluorescence method (Straubinger, et al., 1990) prior to drug loading, and indicated essentially no inside-outside pH gradient (less than 0.2 pH units), compared with the gradient of several pH units typical for ammonium ion gradient liposomes (Haran, et al., 1993). The following results were obtained (nd, not determined)

WEST Refine Search Page 1 of 1

# **Refine Search**

## Search Results -

Terms	Documents
liposome same hydrat\$ same ammonium same sucrose	25

US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
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IBM Technical Disclosure Bulletins

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L2	Refine Search
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# **Search History**

DATE: Wednesday, January 16, 2008

**Purge Queries** 

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DB=PGPB, USPT, USOC, EPAB, JPAB, DWPI, TDBD; PLUR=YES; OP=OR

<u>L2</u> liposome same hydrat\$ same ammonium same sucrose

25 <u>L2</u>

L1 liposome same hydration same ammonium same sucrose

8 L1

**END OF SEARCH HISTORY**